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FIXATION OF THE ROUND LIGAMENTS IN ALEXANDER'S OPERATION.

BY ROBERT ABBE, M.D.,
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Surgeon to St. Luke's Hospital, and to the New York Cancer Hospital.

FIXATION OF THE ROUND LIGAMENTS IN ALEXANDER'S OPERATION.[1]

By ROBERT ABBE, M.D.,

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THE field of general surgery having been invaded by gynæcologists almost without exception, it becomes the duty of the general surgeon to note why it is he has often drifted into the habit of omitting many operations on the female generative organs from his list of clinical work, and abandoned this field to some extent to his gynæcologist brother.

Trained as he is by long and arduous study and special research to equip himself for every surgical work, why should he fail to bring his skill to bear on any one special portion of the human anatomy? Is he to acknowledge his incompetence,—his inexperience? Is there any mystery or special and unconquerable technical difficulty that with a very little extra study he may not be master of?

Is there any surgical principle involved in this field that forbids it to him, who is master of all other abdominal work?

Is he to confine his study to the cranium and omit the pelvis,—to the abdominal and omit the pelvic viscera,—to remove tumors everywhere in the body, but those of the ovaries and uterus?

Is the gynæcologist fresh born from the clinic, and who now affects to operate on the intestines, appendix, ureters, kidneys, spleen, rectum, bladder, and breasts, to supersede the all-round surgeon in this field?

[1] Read before the New York Surgical Society, October 14, 1896.

The opportunity to study the class of diseases which so many surgeons have been willing to let slip through their hands has been lessening by reason of the abstraction of this enormous class from the general wards of our hospitals.

Hence we have been both willing and unwilling parties to the loss.

To say that one who is worthy to be the supreme authority as operating surgeon of any one of our great hospitals is unable to do this class of work in its perfection, is to discredit his position and ability.

Hence it has happened that, while the general surgeon has developed principles which have made it possible for him to do an enormous number of hitherto unwarranted operations with safety, satisfaction, and success, his discoveries have been immediately utilized by specialists who also mass the clinical material in their special clinics, which would otherwise go to his service.

The word specialist has become a sort of fetich to the public, and the general wards of every hospital have seen fewer and fewer gynæcological cases than would have been their legitimate due.

Hence the tyro in gynæcology will nowadays report scores of laparotomies for salpingitis, ovarian tumors, fibroids, hysterectomies, Alexander's operation, etc.

It is inconceivable that any of our hospital surgeons, after twenty years' accumulated experience, should not do in its perfection any operative work that now is claimed after two or three years' experience by those who affect the specialties.

Among the many admirable procedures given to the surgical world by a general hospital surgeon, and now performed in thousands of cases by specialists, is the procedure to elevate the retroverted or prolapsed uterus by its round ligaments, so well provided by nature for the purpose.

Fifteen years ago Mr. William Alexander, general surgeon of the Liverpool Workhouse, first carried out this procedure, and his name alone should always be credited with it.

Since Alexander proposed his operation, I have had a number of cases drift unsought into my surgical service in hospital

and private—about twenty-five in all—to which this admirable operation was applicable.

These were cases of either marked prolapse with rectocele or cystocele, or complete retroversion or retroflexion.

Twenty-five cases to a specialist would sound like a small array. But I have had in these an opportunity to apply with satisfaction what seemed to me a better principle of fixation than that adopted by others following the routine methods.

Eight years ago I spoke of this at a meeting of the Clinical Society and published reports and illustrations.[1] Since then I have used no other method.

At that time there had been but one way resorted to to fix the shortened ligaments,—namely, to stitch them at the external ring after drawing them out, and to cut off about three inches of redundant ligament.

There followed a considerable number of complaints of relapse attributed to stretching of the ligaments. Others, at times, found painful traction of the dimpling scar at the site of stitching. Others failed to find the ligaments at all at operation, and still others had occasionally a hernia ensue, after the canal had been slit up to find the ligament, when it was not discoverable at the pubic end.

It always seemed to me that when the ligament had been drawn out and cut off at the external ring, it was hopeless to expect it permanently to seal itself in the elastic tissue of the new inguinal scar with the uterus dragging constantly upon it. Hence, even at the first operation, I felt that I could only insure against retraction by some other method of fixation.

By dragging one ligament through the subcutaneous pubic fat and tying it to the other at the inguinal orifice, by a square knot, the result was accomplished. This method, devised and practised in two cases by me ten years ago, has since come into vogue, and been advocated by Martin, who attributes it to Duret, of Lille. The above mentioned report, however, shows its use many years prior.

[1] New York Medical Journal, March 17, 1888.

Among my early cases I was confronted by the difficulty which every operator finds, that in a few cases it is impossible to isolate the pubic end of the ligament unless one slits up the canal an inch or an inch and a half. In such a case one fears weak union of the fascia even after suturing, and hernia is quite a probable sequel.

The idea occurred to me of utilizing the round ligament itself for the double purpose of sewing up the inguinal canal and securing the ligament immovably.

This I found was easily accomplished when the ligament was drawn out four inches, as was always readily done.

A large, curved Hagadorn needle, threaded with a loop of heavy-braided silk, was passed into the upper angle of the canal and brought out a half inch above it through the edge of the transversalis and tendons of the oblique abdominal muscles. By this loop the round ligament was drawn back into the canal and out of the new opening made by the needle.

The inguinal canal was now entirely free. The ligament was drawn upon until the uterus was firmly held well forward. The needle and loop now drew the ligament through new punctures on either side of the canal, causing it to become a continuous suture for the canal. Three such stitches completely closed the canal up to the spine of the pubis,—and left more than an inch and a half of ligament over. This was turned back over the last portion of the wound and stitched to it by one fine catgut stitch. The terminal inch or more which had been handled by forceps and dragged by the loop was cut off so as to leave no damaged part of the ligament.

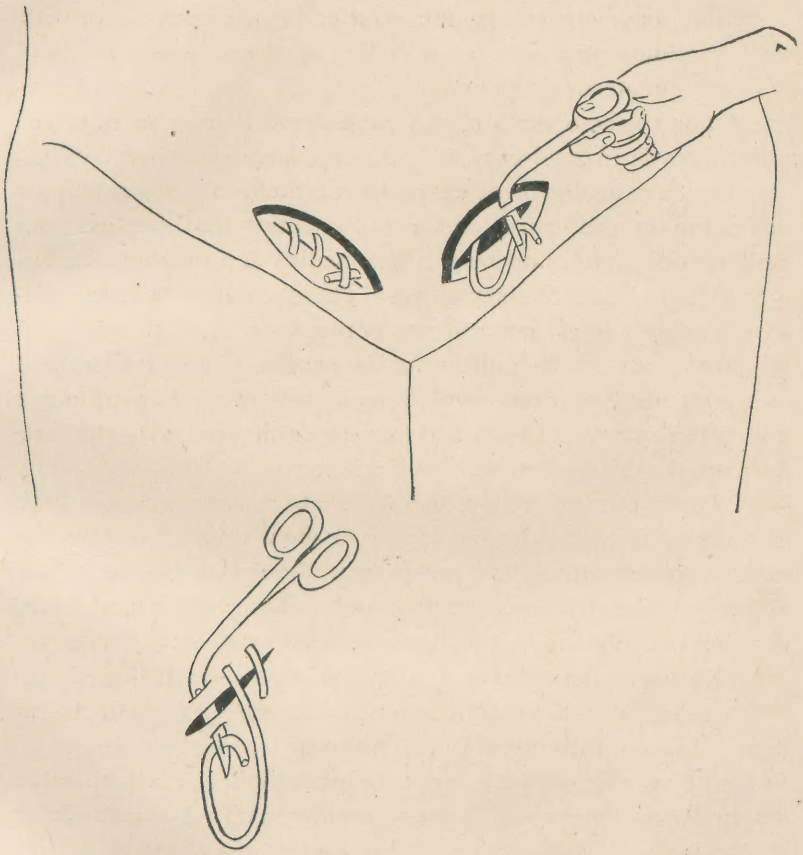
The needle puncture, when somewhat enlarged by pressing the needle sidewise once or twice, readily allowed the ligament to pass through, and yet, when the operation was complete the latter maintained its own circulation. A few fine catgut sutures closed the skin over the sutured canal.

Primary union invariably occurs after the operation, and in thin subjects this buried natural suture can be felt for weeks.

The results are all that can be desired. The uterus invariably remains in exactly the position left at operation, and the

canal remains perfectly solid. The use of living tissue as a suture thus serves the double purpose of fixing the uterus immovably and binding the canal permanently.

The use of a small curved clamp to replace the needle and loop has very much improved the operation. This instrument is somewhat like a small, thin Cleveland ligature-carrier



Abbe's method of fixing the round ligament by suturing the inguinal canal with it.

less curved, and pivoted nearer the point. It readily pierces the fascia, picks up and draws the ligament through the puncture it makes, so that the suturing is but the work of a moment.

Most of the time consumed in this operation has heretofore been taken up in finding the ligament, which now is not lost,

because the canal is always exposed by dividing the fascia before search is begun.

The cord can quickly be picked up in the canal and separated from its cellular and muscular envelopes as it is drawn upon. It is best to begin search an inch or more from the pubis where the cord begins to have volume, and strip from it its ensheathing envelope of muscular fasciculi continuous above with the surrounding muscle.

If the uterus is bound by light adhesions it is no contraindication to the operation, as I have several times encountered this obstacle to replacement. Twice I have passed my index-finger along the ligament, tearing open the thin peritoneal prolongation in the canal and readily freeing the fundus. On another occasion an opening in the median line to admit one finger accomplished the same end. These cases proceeded precisely as well as in uncomplicated ones.

In all cases one must practise handling the ligament and other tissues exclusively with forceps,—the fingers need never touch the tissues of the wound from beginning to end,—thus one is insured against possible suppuration.

The absence of risk of the ligament drawing back, or of the sutures of living tissue giving way, make it unnecessary for the patient to remain in bed longer than the ten days needed for primary union of the external wound. By all other methods of fixation in the wound, four to six weeks have been advised.

No vaginal tampon or pessary is needed after this method.

Hence, also, the bladder is not often in need of catheterization. Indeed, this organ is less pressed upon when the uterus is held by the ligaments emerging from a higher point above the internal ring than when they drag on its inner edge, as in other methods.

The striking advantages of this simple method are: that it can be done with speed; that the ligaments are infallibly found and handled where they are strongest; that a clean wound is made with least tearing of tissues to get the ligament out; that the canal is closed beyond the chance of subsequent hernia; that the ligament is removed from the canal scar, thus preventing

dragging upon it; that the ligament can never slip back; that the uterus may be elevated to a slightly higher point and makes less bladder pressure; that the patient may get up on the tenth day; that no tampon is used and catheter seldom.

The wide and growing interest displayed in all countries in the Alexander operation attest its value.

Two new methods of fixing the retroverted uterus are competing as substitutes,—namely, suturing the fundus to the anterior abdominal wall, and suturing it to the anterior vaginal wall.

The demerits of these methods are being discussed by those who have resorted to them. In this city at the February meeting of the Obstetrical Society Dr. Edebohls quoted the results of gynæcological work by Strassman in Berlin, in vaginal fixation for retroversion.

"Already among those who have conceived after this operation there has been a harvest of abortions (about 25 per cent.), painful cicatrices, bladder disturbances during gestation, false presentations, difficult and complicated labors, and even Porro operation made necessary because the fundus, being fixed to the vagina the cervix pointed upward, making normal delivery impossible.

"A variety of accidents were brought to light by the discussion, and it is estimated there are a thousand women in Berlin who have been subjected to this unsurgical procedure, who are awaiting conception and are in imminent danger. In New York there may be about two hundred."

Frightened by their work, we are told, they are now renouncing it.

" Mackenrodt, the originator, has now gone back on it and invented 'fixation to the bladder.'"

Ventro-fixation also is now reaping its unwelcome fruit.

As Dr. Edebohl remarks, " It is repugnant to every surgical instinct to create adhesions unnecessarily in the peritoneal cavity."

The sequel of the Alexander operation seems to have no such train of misadventures. Many scores of patients have borne children to full term without the slightest mishap.

Experience also shows that after pregnancy the ligaments are found to be as they were after operation and no retroversion occurs.

Every surgeon finds a sense of satisfaction in doing well an operation of such merit, yet of so little risk.

There will always be a considerable number of patients who will apply to him and look to him for the most perfect work in this class of cases so widely assumed by the gynæcologist, and it becomes his duty to handle them in the same efficient way that his broad surgical training and incessant activity in all fields fully enables him to do.